

# Scientific Measurements



## FORMAT

The test will consist of the following topics:

- SI and metric systems
- Using measuring tools
- Accuracy and precision
- Recognizing significant figures
- Review

## VOCABULARY

mole  
meter  
joule  
error  
liter

accuracy  
temperature  
percent error  
derived units  
gram

precision  
Celsius  
Kelvin  
volume

qualitative measurement  
quantitative measurement  
International System (SI)  
significant figures

## KNOW

- significant figures
- metric prefixes
- 7 fundamental SI units
- cgs system

## BE ABLE TO

- determine significant figures
- use a metric ruler
- use a scale
- determine the correct sig figs

## RE VIEW

- safety rules
- scientific method
- lab equipment

TEST DATE: \_\_\_\_\_

# Practice

**DIRECTIONS:** Circle the larger unit in the following pairs.

kilogram : gram      milliliter : liter      centimeter : meter      liter : cubic centimeter

**DIRECTIONS:** Perform the following metric conversions.

45 km = \_\_\_\_\_ cm      26.9 L = \_\_\_\_\_ cm<sup>3</sup>      454 g = \_\_\_\_\_ kg

160 mm = \_\_\_\_\_ m      4 cm = \_\_\_\_\_ m      5 L = \_\_\_\_\_ mL

**DIRECTIONS:** Write the number of significant figures in each of the following.

\_\_\_\_\_ 6.0940      \_\_\_\_\_ 0.0080      \_\_\_\_\_ 1,203.0      \_\_\_\_\_ 2540.      \_\_\_\_\_ 24.130  
\_\_\_\_\_ 250.00      \_\_\_\_\_ 5.0      \_\_\_\_\_ .321      \_\_\_\_\_ 1.6040      \_\_\_\_\_ 0.000010100  
\_\_\_\_\_ 14.809      \_\_\_\_\_ 3.50      \_\_\_\_\_ 107.334      \_\_\_\_\_ 0.0950      \_\_\_\_\_ 0.000489

**DIRECTIONS:** Determine the length and width of the bar below using the correct significant figures.

length \_\_\_\_\_

width \_\_\_\_\_



**“There are two ways to live your life. One is as though nothing is a miracle.  
The other is as though everything is a miracle.” - Albert Einstein**